

Municipal Vulnerability Preparedness Program Action Grant Case Study

Municipality: Mendon

Project Title: Mendon Town Hall Campus Green Stormwater Infrastructure: Design through Contractor Mobilization

Award Year (FY): FY22

Grant Award: \$ 169,905

Match: \$ 61,072+

Match Source: \$7,210+ in-kind and \$53,862+ cash

One or Two Year Project: One

Municipal Department Leading Project: Land Use Committee

Project Website URL: www.mendontownhallcampusgreenguide.com

Community Overview:

- **What is the population size of your community and where is it located?**

Mendon's population is approximately 6,115 and it is located in the Central region of the state in the Blackstone River Valley and watershed.

- **Do you have any [Environmental Justice](#) or other Climate Vulnerable communities?**
(Think about both those who live and work in your town.)

We do not have any in our town, but have many neighboring towns with EJ communities.

- **Other unique traits of your municipality like who the top employers are, geography, history, etc.**

Mendon is a hilltop community located in the historical Blackstone River Valley. According to the Department of Housing and Community Development's profile of Mendon, it has one of the best-preserved Federal Greek Revival hilltop village centers in the state, with large tracts of open land adjacent to the center. Mendon has a total area of 18.3 square miles.

Mendon was founded in 1667, the second oldest town in Worcester County. The Nipmuc Indians lived in this region. The Blackstone Valley is the home of the American Industrial Revolution, because of the Blackstone River and its tributaries. However, Mendon has a rich agricultural past. Mills popped up in neighboring towns and Mendon's farming community supplied the food to the neighboring towns. One farm in Mendon turned into a wild animal farm and is now Southwick's Zoo, the largest zoo in New England.

Mendon has development pressure, but over the past two and half decades, Mendon has preserved several corridors of beautiful open space and continues to do so. Mendon voters have also approved bylaws to help preserve land and use low impact development techniques to protect land, water and aquifers.

Largest Employers in Mendon		
Company	Location	Number of Employees
Imperial Ford	Uxbridge Rd.	100-249
Miscoe Hill Middle School	North Ave.	100-249
Southwick Zoo	Southwick St.	100-249
Henry P Clough Elementary School	North Ave..	50-99
Sudbury Granite & Marble Inc	Hastings St	50-99

Source: Massachusetts Department of Unemployment Assistance, 2021 and Massachusetts Department of Labor and Workforce Development, 2021

Project Description and Goals:

- **Where was the project located?**

In Mendon's Village Center, which buildings and landscape were placed on the National Register of Historic Places in 2003. This site includes the Mendon Town Hall c.1840 (Harrison Hall), the Union Chapel c. 1896 (former Taft Library) and the Fire Station c. 1950 (adaptively reused as the new Mendon Police Station).

- **What climate change impacts did the project address?**

Flooding, erosion, heat island effect and aquifer protection.

- **What were the specific goals and tasks of the project as stated in your application?**

This grant proposal was for the first year of a two-year project. The project goals included developing a design to add aesthetic value to the Mendon Town Hall Campus while incorporating and focusing green stormwater infrastructure (GSI) and low impact

development (LID). The project goals also included bringing the design through permitting and initial construction (contractor mobilization). The project also includes planning the educational/outreach components to highlight to the public and surrounding towns how to incorporate GSI and LID practices into most if not all new development and redevelopment projects. The project included using a suite of nature-based solutions to manage, treat, and infiltrate stormwater runoff using practices such as planters that capture rooftop runoff, bioretention, pervious pavement and pavers, infiltration systems and de-paving a portion of the existing driveway and parking lot northwest of Mendon Town Hall. The second year will be completion of construction, certification and implementing the remainder of the educational/outreach components of the project. The specific tasks of the project included:

- Task 0: Kick-off Meeting with Town of Mendon and MVP Program Staff
- Task 1: Data Collection, Field Reconnaissance and Confirmation of GSI Control Measures
- Task 2: Existing Condition Plans (Field Survey and Test Pits)
- Task 3: 25% Preliminary Design
- Task 4: 75% Design and Local Permit Application
- Task 5: 100% Design, Specifications Project Manual and Final Cost and Quantity Estimate
- Task 6: Bidding Services and Recommendation for Contract Award
- Task 7: Preconstruction Educational Signage, Printed Materials and Project Website
- Task 8: Monthly Reporting and Project Case Study

- **Did your project meet the goals set forth in your application in terms of:**

- **Employing nature-based solutions**

Yes, the following nature-based solutions were included in the design: bioretention, stormwater planter capturing rooftop runoff, and pervious pavement/pavers.

- **Improving equitable outcomes for and fostering strong partnerships with EJ and other Climate Vulnerable Populations**

No, except that in the second year of the project we will be inviting the neighboring communities with EJ communities to the site for educational workshops on the benefits of nature-based solutions for GSI and landscaping.

- **Providing regional benefits**

Yes, thousands of cars drive by the Mendon Town Hall daily and they will see the drastic improvements made at this site. The site will have educational signage and a walking tour with accompanying brochures and QR codes signs linked to the project website that people can use to learn about the site.

- **Implementing the public involvement and community engagement plan set forth in your application**

Yes, this started this year with the designing of the signage, website and walking tour brochure. Next year, those materials will be finalized upon construction completion and educational workshops and information will be developed and implemented.

Finishing the project on time

Yes

Results and Deliverables:

- **Describe, and quantify (where possible) project results (e.g. square footage of habitat restored or created, increase in tree canopy coverage, etc.). Report out on the metrics outlined in your application.**

The project's Stormwater Report documents the land coverage pre- and post-project. Note that some of the area detailed below is outside the project site but considered included in the drainage area. The project resulted in a decrease of impervious pavement and gravel, and runoff generated from rooftops, and an increase in permeable surfaces.

<i>Pre-development</i>		<i>Post-development</i>		Change in Area
Cover type	Area (ft²), %	Cover type	Area (ft²), %	
Paved	33,500, 36%	Paved	32,221, 35%	-4%
Gravel	17,036, 18%	Permeable	6,451, 7%	-62%
Rip Rap	671, 1%	Rip Rap	671, 1%	0%
Roof	14,297, 15%	Roof	11,775, 13%	-18%
Water/BMP	0, 0%	BMP	1,106, 1%	N/A
Woods	10,063, 11%	Woods	10,063, 11%	0%
Grass	17,391, 19%	Grass	30,671, 33%	76%
PRE	92,958, 100%	POST	92,958, 100%	

- **Provide a brief summary of project deliverables with web links, if available.**

This project had the following deliverables by task:

Task	Deliverable
1	Spreadsheet of existing data and information received Kickoff meeting agenda and summary notes Field reconnaissance summary report
2	Existing conditions plan Summary of soil evaluation
3	25% Preliminary Design Plan Set 25% Design Cost Estimate Hydrologic and Hydraulic Computations at 25% Design
4	75% Design Plan Set Permitting Applications
5	100% Design Plan Set Bid Package Project Manual
6	Project Advertisement in Central Registry Pre-Bid Meeting Agenda Written Addenda Recommendation of Aware Pre-Construction Meeting Minutes
7	Draft graphics for up to three educational sign boards Draft project website Draft walking tour paper brochure
8	MVP Case Study Report

This included using a suite of nature-based solutions to manage, treat, and infiltrate stormwater runoff using practices such as rooftop runoff capturing planters, bioretention, pervious pavers, infiltration systems and depaving a portion of the existing driveway and parking lot northwest of Mendon Town Hall. Visit the website for details: www.mendontownhallcampusgreenguide.com

Lessons Learned:

- **What lessons were learned as a result of the project? Focus on both the technical matter of the project and process-oriented lessons learned.**

We had a good committee representing most of the stakeholders in the project, including the Fire Chief and the Police Chief. We promoted the project on social media and through the newspapers to solicit input from the community. This was very helpful in making the project meet the needs of the town and receiving the funding needed for the construction of the project at the Mendon Annual Town Meeting.

Meeting on a regular basis help us keep the project moving forward and if changes were needed, we could make them in a timely fashion.

- **What is the best way for other communities to learn from your project/process?**

Visit the website www.mendontownhallcampusgreenguide.com and take the walking tour with QR codes linking to the website; attend the educational training when it occurs in Year 2

Partners and Other Support:

- **Include a list of all project partners and describe their role in supporting/assisting in the project.**
 - *The Horsley Witten Group* for technical expertise
 - *Town Administrator* for policy and big picture decisions
 - *Police Chief and Fire Chief* for safety needs of the site
 - *Highway Surveyor* for maintenance needs and road safety of the site
 - *Historical Commission Rep* for preservation and promotion of the historical nature of the site
 - *Land Use Committee Rep* for the understanding of the use of low impact development and coordinating with other committees
 - *Director of Parks and Recreation* for landscape and technical details
 - *Town Planner* for bylaw and permitting requirements
 - *MVP Regional Coordinator* for details on the grant and suggestion of ideas
 - Many others who played a role at different points in the process

Project Photos:

- In your electronic submission of this report, a few high-resolution (at least 300 pixels per inch) representative photos of the project. Photos should not show persons who can be easily identified, and avoid inclusion of any copyrighted, trademarked, or branded logos in the images. MVP may use these images on its website or other promotional purposes, so please also let us know if there is someone who should receive credit for taking the photo.

Since construction has not yet begun, there are no photos of the construction phase or of the completed project. More photos will be documented and uploaded to the project website during and post-construction.

Photo 1: Project site before a barren asphalted landscape (Google images)



Photo 2: Rendering of proposed design



Photo 3: Campus site pre-construction, behind Town Hall.



Photo 4: Campus site pre-construction, behind Town Hall.



Photo 5: Campus site pre-construction, behind Old Library



Photo 6: Campus site pre-construction, between Town Hall and Old Library